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"Lapbotic" Surgery: Blending the Expertise of an Advanced Minimally Invasive Surgeon With the Precision of a Robot to Best Serve the Patient

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INTRODUCTION

For all intents and purposes, laparoscopic surgery began in 1989. Historically, as this technique gained in popularity, initial evaluations were often lacking when compared with open surgery; however, since that time, there have been marked improvements in our minimally invasive technology (ie, advanced techniques, camera systems, instrumentation, and educational curricula) to develop the skills needed to perform laparoscopic procedures safely and effectively. Not surprisingly, as skill levels and instrumentation have evolved, minimally invasive technology has clearly been shown to have consistently more favorable outcomes than open procedures in the appropriate clinical setting.

In the mid 2000s, computer-assisted surgery, also known as robotic surgery, became another usable tool in the minimally invasive surgical toolbox. With the inception of this technique, there too came heated debates on whether the robot or laparoscopic surgery has better outcomes for patients. Both of these technologies offer clear advantages to the patient over open surgery; that point has never been debated.

From an economic standpoint, such as that of a Fortune 500 company, the only concern is that the patient (the employee) is returned to work sooner with less disability and an excellent outcome. The cost associated with how that outcome is achieved is not important. Conversely, from an insurer's point of view, importance is placed more on both cost and outcome as "a package," if you will.

What if both robotic and laparoscopic surgery procedures had the same outcomes and costs? Would this debate still exist? And, is it possible to "have your cake and eat it too"? Hard-line laparoscopic and robotic surgeons often take a "my way or the highway" stance regarding techniques. But what if we could combine them? Getting the cost-effectiveness, efficiency, and expertise of the laparoscopic surgeon and the precision of the robot with a training continuum for both . . . now that makes sense.

Clearly, the precision of robotic surgery has a marked advantage over the human tactile equanimity; however, human skills and judgment are needed to operate the robot for favorable patient outcomes. The important thing for the medical professional on either side of the debate is to understand that new technology will continue to be introduced. I think it is beneficial for the surgeon, whether a general, colorectal, urologic, or gynecologic surgeon, to understand the advantages of all these technologies and incorporate them properly into his or her practice. By the same token, device manufacturers have an obligation to incorporate a "what is best for the patient" mantra when determining device cost and introducing new technologies and instrumentation to the market, versus the "for profit only" line that has been "standard in the industry" thus far. Like recycling, reducing health care cost should be everyone's responsibility. It is a realistic goal that both sides come to a mutually amenable end. Achieving that "end" will make us all better surgeons, better insurers, better employers, and most importantly, better humanitarians.

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